CAL RIPKEN, SR. Foundation

TRANSFORM COMMUNITIES
CHANGE KIDS' LIVES

STEM

PRODUCT GUIDE

EDUCATIONAL ACTIVITIES

Bee-Bot; Code Hopper; littleBits; Makey Makey; Ozobot; ROK Blocks; Snap Circuits; and Squishy Circuits are included in every standard Ripken Foundation STEM Center Toolkit and can be customized for the needs of the individual program site.

BEE-BOT **(FROM TERRAPIN)**

Programmable robot that uses buttons and simple commands.

Items each school receives:
- 6 Bee-Bot robots
- 1 Community mat
- 1 Card mat
- 1 Docking/Charging station

Storage:
Does not come in its own container, but they can be stored on the docking station.
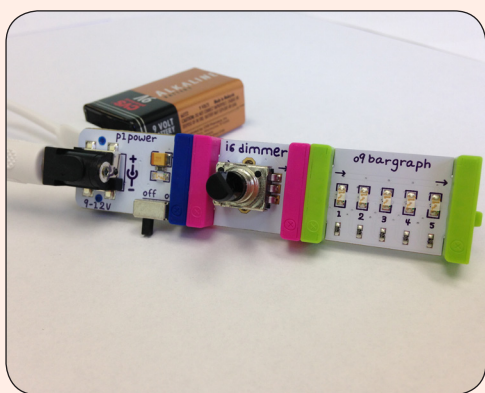
CODE HOPPER **(FROM MINDWARE)**

Game that uses interlocking foam tiles to teach decision making, and basic coding principles.

Items each school receives:
- 12 two-sided mats
- Parent Guide

Storage:
Comes in a box that can be used for storage.

LITTLEBITS

Electronic "building blocks" that combine to make circuits and accomplish different tasks.

Items each school receives:
- 8 STEAM Class Packs
- littleBits Engineering Design Lesson
- littleBits and accessories
- Educator's Guide
- Introduction and littleBits Basics Guide
- Invention Guidebook tied to the Next Generation Science Standards (NGSS) and Common Core Standards
- Online resources

Storage:
Each set comes in a box that can be used for storage.
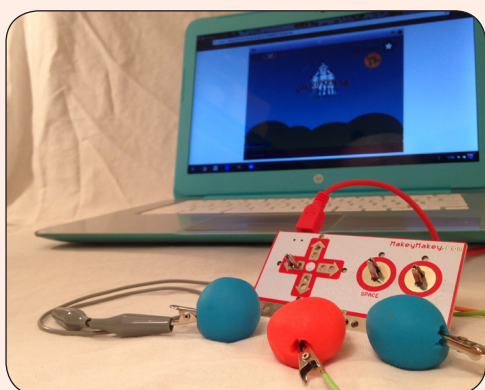
MAKEY MAKEY (FROM JOYLABZ)

Programmable computer chip that connects coding and practical applications.

Items each school receives:
- 1 STEM Class Pack (which includes 12 Makey Makey chips along with wires and clips)
- Makey Makey Classic boards
- Makey Makey Music & Fun Challenge
- Connecting wires
- USB computer connecting wires
- Graphite pencils optimized for use with Makey Makey
- Organizing carrying case
- Basic instruction guides

Storage:
Comes in one storage case for all items.
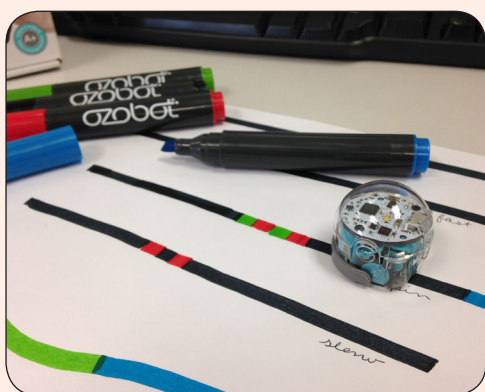
OZOBOT (FROM EVOLVE INC.)

Programmable robot that uses markers and simple commands.

Items each school receives:
- 1 Class pack—Ozobot Evo (includes 12 Ozobots)
- Ozobot Bowl-O-Rama Lesson
- Multi-port chargers
- Sets of markers
- Tip sheets
- Teacher's Guide
- Storage boxes
- Online resources

Storage:
Comes in a container that includes accessories and an additional storage container for just the Ozobots.
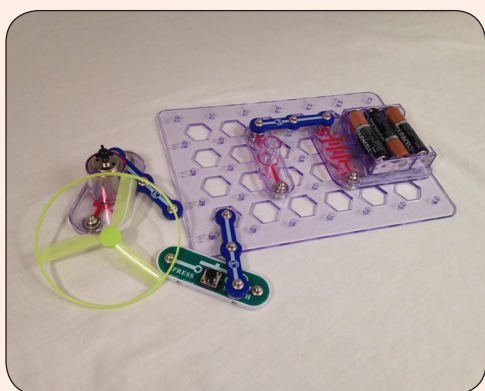
ROK BLOCKS **(FROM KID SPARK EDUCATION)**

3D Building blocks that combine to make different creations.

Items each school receives:
- Rok Blocks Cargo Racer Challenge
- Stackable cases which hold various pieces and parts
- Access to online lesson plans

Storage:
Comes in organized storage containers that stack and lock together, and come with a wheeled base.

SNAP CIRCUITS **(FROM ELENCO)**

Pre-fabricated components that work together to create various circuits.

Items each school receives:
- 12 Snap Circuits Jr.® Education 100 Experiments Kits, including:
  - Wire
  - Resistor
  - Speaker
  - Motor
  - LED
  - Switch
- Snap Circuits platform board
- Snap Circuits Electric Bingo
- Project instruction guide

Storage:
Each kit comes in a storage case.

SQUISHY CIRCUITS

Teaches circuitry using conductive and insulating doughs.
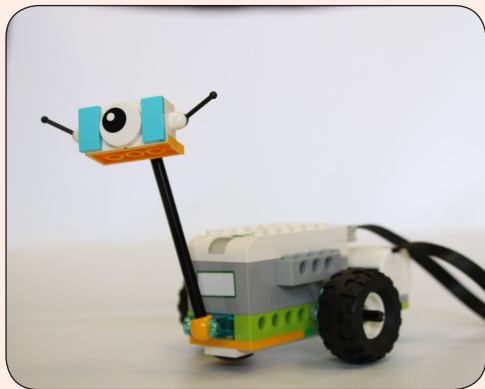
Items each school receives:
- 1 Group Kit (includes enough components for a class), including:
  - Battery holder
  - LEDs (various colors)
- 2 Dough kits, including:
  - Battery holder
  - LEDs (various colors)
- Squishy Circuits Conductive Creations

Storage:
Comes in a storage kit for the electrical components, the dough is stored in separate containers.

OPTIONAL EDUCATIONAL ACTIVITIES

LEGO® Coding Express and LEGO® WeDo 2.0 are not included in a standard Ripken Foundation STEM Center Toolkit and cost full price to add. However, LEGO® items can replace others of equal value in the standard STEM Center Toolkit if they work better for your kids. For example, littleBits can be replaced by LEGO® Coding Express to reach younger kids.

LEGO® WEDO 2.0

Combines the standard LEGO® brick with motors and sensors for kids to build creations and code them to move and react to their environment.

Items each school receives:
- LEGO® bricks
- Organizing tray
- Motors and sensors
- Access to online lessons

Storage:
It comes with its own storage container.

LEGO® CODING EXPRESS

Taking the train set to the next level, the LEGO® Coding Express uses large, colorful bricks to teach STEM concepts such as cause and effect, and basic coding principles like sequencing and looping.

Items each school receives:
- LEGO® DUPLO® bricks
- Battery-powered train
- Getting Started guide
- Access to online lessons

Storage:
It comes with its own storage container.

EQUIPMENT

The electronic equipment, furniture, and materials listed below are included in every standard Ripken Foundation STEM Center and can be customized for the needs of the individual program site.
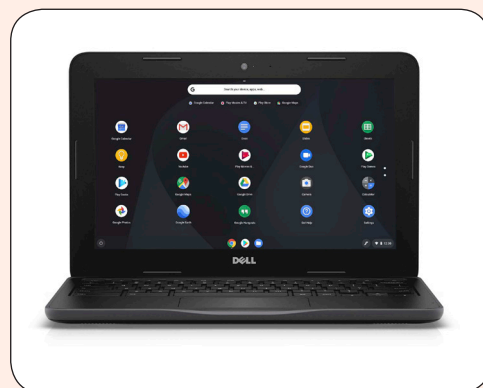
3D PRINTER

Items each school receives:
· 1 Robo3D E3 Printer

COMPUTERS

Items each school receives:
· 6 Dell Inspiron Chromebook 11

ADDITIONAL MATERIALS FOR EACH SCHOOL

These materials support the overall STEM program and are not tied directly to one kit.
· 4 Surge protectors
· Supply of AA Batteries

TABLES
(SMITH SYSTEM)

Items each school receives:
· 7 Elemental Clover Tables (seats 4)

SEATING
(SMITH SYSTEM)

Items each school receives:
· 28 Flavor Stackable Chairs (16" Height)

WORKBENCH

Items each school receives:
· 1 Mobile Workbench — *Exact model will depend on availability.*